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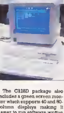
Vol 5 No 4

Commodore 128D launched at NEC

Las Vegas show report *see p6*

COMMODORE stole the lime light at the *Which Computer?* show at Birmingham NEC with launch of the 128D, and the first public showing of the Amiga, despite the fact that the show is mainly aimed at business heavyweights

The 128D, intended as a small business complement to the 128 features a built-in 4½ inch disc drive and the 1571 doubled-sided disc drive The other major difference between the 128D and the 128 is the detachable keyboard, a feature designed to attract business users



The C128D package also includes a green screen monitor which supports 40 and 80-column displays making it easier to run software written for the best-selling 64, as well as dedicated 128 programs

Some new software was being demonstrated, including *Script 128* and *Vizawrite 128* both word processors programs, *Micro Clerk*, an integrated suite for retailers; and *Acqusition*, a programmable database with similarities to the best-selling *dBase II/III*

Commodore says the machine will be available from next month priced, including VAT, at £536 85

The Amiga attracted large crowds, although there was very little software on show to appeal to business users, which is the market Commodore is primarily aiming at in this country So far, there is a reasonable range of programming languages, some exciting graphics and sound packages and a small number of useful applications

Commodore's UK sales and marketing director, Chris Kaday, talked optimistically continued on page 4 ▶





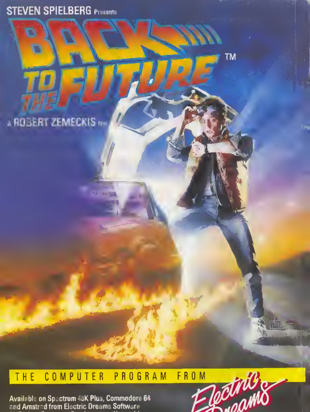
The Atari ST version of The Pawn is to be released by Rainbird Software in mid March, and was unveiled at the winter CES in Las Vegas recently (see show report on page 6)

It is the first of a planned series of conversions of the program which was first released on the QL last autumn.

The Pawn has been praised for its highly sophisticated cont. p4 ▶

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NEW SERIES
The Atari 520ST
Software and firmware

THIRD SPECIAL OFFER COUPON TO CUT OUT – P8


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Vol 5 No 4



EDITORIAL

Commodore's launch of the 128D at £873 68 at the *Which Computer?* show lends more, rather than less confusion to its marketing strategy for 1986

The 128D is aimed at the small business user and as such, provides a viable option to other inexpensive CP/M machines such as Amstrad's CPC 6128 and PCW 8256, a cheaper alternative to more established business computers, and possibly some competition from Acorn's Master 128

But the greatest competition may well come from its own sibling machine the C128 The C128 is either a revamped Commodore 64 at £269, or a possible for the small business and more serious user with its army of peripherals. When put together, an equivalent system for the 128D (monochrome monitor, 1571 drive, which Commodore still plans to launch separately) will cost between £570 and £670

There are three possible markets here for three Commodore machines for the games player who wants lots of software and the chance to tinker with utilities, music and programming, the 64 (quite feasible) For the serious small business user, who doesn't want to spend too much and doesn't mind having access to the odd game, the C128D (equally feasible) And for the small business user who wants to buy a system one piece at a time, or the games player who wants a very expensive 64, the C128 (not so feasible)

The C128D fits neatly into a slot for the serious user who will also enjoy the advantages of 64 compatibility but it leaves the C128 in an uncomfortable niche

Editor Christina Erskine **Features editor** Graham Taylor **Software editor** John Cook **Production editor** Lynne Constable **Editorial secretary** Lucinda Lee **Advertisement manager** Jeff Ziggen **Advertisement Executive** Diane Halyoak **Advertisement executive** David Osen **Administration** Geraldine Smyth **Managing editor** Peter Worlock **Publishing director** Jenny Ireland **Published by** Sunshine Publications Ltd, 12-13 Little Newport Street, London WC2H 7PP Tel 01-437 4343 Telex 296275 **Typeset by** Publishers Reprographics Services Ltd 4 Roger Street, London WC1 **Printed by** Greenaway Harrison, Sutton Road, Southend-on-sea, Essex. **Distributed by** S M Distribution, London SW9 Tel 01-274 8611 Telex 261643

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How to submit articles Articles which are submitted for publication should not be more than 2000 words long. The articles and any accompanying programs, should be original. It is breaking the law of copyright to copy programs out of other magazines and submit them here — so please do not be tempted **Accuracy** *Popular Computing Weekly* cannot accept any responsibility for any errors in programs we publish, although we will always try our best to make sure programs work.

Computer Trade Association Magazine of the Year

CBM launch at Which? Show

◄ continued from page 1

about specialist applications like desktop publishing and graphic design, but Commodore needs to win the support of the mainstream business software market.

Apple used the show to announce the second stage in the Macintosh's development and to cease production of the first, the 128K Mac

The new machine, called the Macintosh Plus, comes with 1 megabyte of Ram and a new disc drive that gives 800k of storage on a single ½ inch disc.

Apple has also enhanced the operating system Rom which now gives better graphics and much faster operation. A new, fast peripheral interface has also been added.

The Mac Plus will cost £2,295, while the 512k Fat Mac stays unchanged – a system including Imagewriter can be had for around £1,200.

Elsewhere, Amstrad was making its *Which Computer?* show debut, promoting the PCW8256 and 6128 machines to the business community. It was assisted in the venture by Digital Research, which launched four of its best known packages for the machines. (see separate story).

Sub £100 modem now ready

THE sub-£100 Voyager 7 modem is now available from Modem House Also available is the more sophisticated Voyager 11, for business micros, at £114 94

For £91 95, the Voyager 7 offers auto-dial and auto-answer facilities, with baud rates of 1200/75, 75/1200 (reverse Prestel), 300/300 full duplex and 1200/1200 half duplex Software is also available for a wide range of micros, including Atari XLs and XE, the Amstrad range including the PCW 8256, BBC B and Commodore 64/128

For the Amstrad, the software uses the SkyCom multi-port interface, which gives access to Prestel's Ammnet The Commodore software was jointly produced by Modem House, Y2 computing and Micronet, and the BBC software also supports all Prestel functions

Modem House also plans a Spectrum Voyager package and packs for the Atari ST and QL in the next month or so

Further details from Modem House, 70 Longbrook Street, Exeter, Devon, EX4 8AP (0392 213355)

The Pawn

◄ continued from page 1

parser (language analysis system) which allowed for complex typed instructions to be issued to the computer

The Atari ST version features highly detailed graphic screens illustrating some of the locations. The program has been converted from the QL by its original creators Magnetic Scrolls, while the graphics are being prepared by Oxford Digital Enterprises, best known for the adventure *Macbeth*.

Further conversions are planned for 16-bit machines and also for the Commodore 64 with disc drive

The package is expected to cost around £25

New ST with bitter tipped for Atari

ATARI is now strongly tipped to be working on a completely new ST machine, which will have greatly enhanced graphic capabilities.

The new ST will not necessarily take on more memory, probably remaining at 512K, the size of the 520ST, now Atari's entry level machine in the US However, it will incorporate a co-processor graphics blitter (block image transferrer). A blitter is a device, currently used in Commodore's rival Amiga micro, which transfers data held in one memory location to another memory location. It can speed up computer operations considerably particularly in screen handling

Atari executives were neither confirming nor denying the existence of such a project "There are rumours, but we're not ready to announce anything yet," said Neil Harris, Atari US's hardware product manager. "But you may hear some interesting announcements at the Hanover Fair this spring "

Art studio offer from Rainbird

THOSE who want to add a professional touch to pictures created with Rainbird's *Art Studio* can now do so, courtesy of Dimension Graphics

For £4 95, Dimension will dump your picture to A4 size paper, using its sophisticated ink-jet printer, from cassette or disc A more professional screen dump can be obtained for £7 95 – Dimension will mount your masterpiece on card and gloss laminate it.

The offer is available to Spectrum (cassette only), Commodore and Amstrad *Art Studio* users.

Further details from Rainbird Software, Wellington House, Upper St Martin's Lane, London WC2H 9DL

Apple announces rosy results

APPLE has announced record results for the quarter ending December 27, 1985

Profits reached an all-time high of $55 9m (£39 79m) on sales of $533 9m (£373 35m) This sales figure is Apple's second highest ever

The announcement comes at an encouraging time for Apple – its upgraded Macintosh Plus was unveiled at the *Which Computer?* show last week. The results also follow stringent cutbacks made at both Apple's Californian base and its British division.

DR Moves on Amstrad

GEM and CP/M creator Digital Research has turned its attention further to Amstrad's PCW 8256 and CPC 6128

The company has launched four packages for the machines – *DR Graph*, *DR Draw*, *Pascal MT+* and *CBasic Compiler* Its Logo is already bundled with the machines

DR Graph is a business graphics program, while *DR Draw* is designed to create visual aids for business presentations

Pascal MT+ is a compiled version of ISO standard Pascal, and *CBasic Compiler* allows Basic programmers to produce fast stand-alone applications Each title costs £49 95 Details from DR at Unit 12, Fonton Way, Southfields Basildon, Essex.

Mirrorsoft has asked us to point out that only an ordinary premier has so far been arranged for the film *Biggles* (see *Popular Computing Weekly*, Jan 16)

CES Show Report

And so to the Sky Ranch Motel in down-town Las Vegas: *Clean, warm, friendly. Stop in for coffee and directions*, proclaimed the huge neon sign. A pool at the side of a six-lane highway, its restaurant a 24-hour takeaway pizza joint in the back room of a slot machine alley.

Yes, it's the Winter Consumer Electronics Show again. Time for the biggest gathering of micro companies in the American computer calendar. Over 100,000 visitors fly thousands of miles just to spend four days in the desert. Those that book early get into the Hilton, or the Dunes, or the Desert Inn. Those that don't end up at the Sky Ranch . . .

This was the show when Atari came good. Not only did it announce some spectacular price reductions and a new machine, but its main competitor Commodore seemed to fade away

No one expected Commodore – currently losing around $30m (£20m) a quarter – to exhibit at the convention centre, but it was surprising that the company gave a press conference on the first day of the show only

In many ways it was a crucial show for both Commodore and Atari. Neither can be described as financially muscle-bound, yet both have new 16-bit micros in the US shops – Commodore's Amiga and Atari's 520ST were both out before Christmas And software is a crucial factor in each machine's success

Now, unlike the situation in Britain, nearly all the major US software houses have abandoned almost entirely the development of programs for the 8-bit machines (Commodore's C128, C64, Atari's XE range and the Apple II – neither the Spectrum nor Amstrad has made any impact in the US) Instead they have switched to developing some exciting products for the 68000-based machines

The problem is that none of them know which machine – the ST or the Amiga – to support. An unprecedented number of US software firms didn't have stands at CES – instead sending roving representatives to evaluate the performance of Commodore and Atari

So it was a grave miscalculation on the part of Commodore not to exhibit The decision had the effect of largely shattering confidence among the US houses that Commodore would come good with the Amiga Even Electronic Arts – the most outspoken supporter of the Amiga – began to get twitchy It has invested $600,000 (£400,000) in developing Amiga material and its marketing vice president Bing Gordon admitted to being disappointed at Commodore's absence

Atari reacted to the situation aggressively as only Jack Tramiel knows how Its large stand was packed throughout the show with people eager to see the 520ST go through its paces Its price in the US is now falling rapidly The 512K machine with mouse, Gem, 3½ inch disc drive and colour monitor now costs just $899 95 (£600) The monochrome monitor version is $700 (£475).

Even more interestingly Atari is to sell a version with just the 520ST and mouse for $399 (£265) The machine now comes with a built-in TV modulator meaning you can use it with an ordinary television.

It could mean that a similar version of the 520ST could end up in Britain selling for, say, £400

Atari also announced a 1M version of its ST for under $1,000 (see *Popular*, January 16) and a pack of its 8-bit 130XE models, 1050 disc drive and 1027 letter-quality printer for $399 (£265)

Atari's ST and 130XE models are now both about half the price of their Commodore competitors, the Amiga and C128, which should give Commodore something to think about.

Apart from Atari, by far the most significant shift of emphasis in the US, is the switch by software houses to produce 16-bit software The programs now in development really are a generation on from anything seen for the C64 or Spectrum. They are a vindication that 68000 is everything it has been cracked up to be a quantum leap in graphics sound, complexity of program and entertainment value. Programs like Electronic Arts *Deluxe Video* and *Return to Atlantis* (the latter still in prototype form) for the Amiga and *The Pawn* from our own Rainbird via Magnetic Scrolls on the ST make the point very well

On the 8-bit software side, most of the new material at CES was for the C64 Apart from a very neat golfing simulation from *Beach-head* author Access, called *Leader Board*, there was little of great interest Microprose showed three new simulation programs for the C64/C128. *Acrojet* is *Decathlon*-meets-*Flight Simulator*, ten acrobatic flying manoeuvres to perform, *Silent Service* is a submarine simulation, and *Conflict in Vietnam*, according to the blurb offers "all the dangers, defeats and victories of more than 20 years of struggle in the jungles and rice paddies" Presumably the object is to embroil your country in a brutal, cruel war it can never win. *Jet*, the follow-up to *Flight Simulator II* on the C64/C128 from SubLogic, looked good, as did a new disc of alternative scenery for *FS II*

One interesting side effect of the dearth of new C64 material in the US is that British developed material is suddenly much in demand. Two UK companies are currently making significant in-roads into the American market Mastertronic and Firebird, the latter via a new US subsidiary Firebird Licensees

There were also quite a few bits and pieces of interest on the hardware side Bodylink is a peripheral for the C64 costing $229 (£160) which measures your heart rate skin conductivity and muscle activity whilst working out The X-10 is the lowest priced home control system yet seen, controlling household electric appliances via a $50 (£33) unit and software for the C64

Grolier Publishing showed a compact disc player and software linked to a micro The system using a dedicated Philips CD player costs $1200 (£800) and connects to an IBM PC Grolier has put its American Academic Encyclopedia on CD, containing an incredible 220 000 pages of A4 text for $199 (£132)

But this was unquestionably Atari's show With its new deal for the US it is now likely that the ST price will in turn be slashed in the UK Then the ST will be the first affordable full 68000 machine

By the final day of the 1986 Winter CES, when exhibitors and visitors alike lost interest in the show and became gripped by American football mania – the Bears and Patriots romped through the final play-off and a place at the Super-bowl – it was universally acknowledged that Atari had played and won

David Kelly

Next week: Software fit for a new generation – some of the startling material now being produced for the ST and Amiga micros


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Letters

Argus tape

As you now incorporate *Home Computing Weekly* with your magazine, I wonder if you can help me with my free computer tape as offered in the last edition of *HCW*, which had a coupon in it offering a free tape for my Plus/4

I posted this to Conlon Development several weeks ago, and the tape has still not arrived I wrote to Coolon asking them to look into it, but have not received any reply

George Chappell
Leeds

The *Home Computing Weekly* free tape offer is in fact still being dealt with by its former publishers, Argus Press. Anyone with queries should write to Argus at 1 Golden Square, London W1, or phone on 01-437 0626

Virgin help

I own a Commodore 64 Shortly before Christmas I ordered a copy of *Now Games 2* for my son direct from Virgin Games In just a few days it arrived, but unfortunately *Airwolf* would not load At first I thought the tape was faulty and as it was only a week before Christmas I phoned Virgin and asked them to help

They immediately sent me a replacement tape, which I received within two days, but the same problem occurred I then realised that the problem could be with my data recorder, so I returned the replacement tape with my apologies to Patricia Mitchell at Virgin. Again just two days later I received a letter from her with advice on concerning an Azimuth alignment kit and offering another tested tape if I needed it

Indeed, the head alignment system is probably out, but in the meantime, I discovered that if I prewarmed the tape and recorder carefully I could load *Airwolf* successfully, which leads me to think that condensation due to cold weather was part of the problem

However, I have nothing but praise for the way Virgin dealt with my difficulties and for the speed in which they responded to my queries I only wish a lot more companies could be the same

Martin Bennett
Oldham
Lancs

Ink flow

I have an MPS 801 printer I find that the ink very soon runs out with the amount of printing that I have to do, and at £8 a throw the cartridges are very expensive I have been using purple cash register ink (goo) to reload, but some of my customers are not 100% satisfied with this arrangement.

I would be obliged if you could tell me where I might purchase some suitable black ink.

A R Griffiths
Houghton Regis
Beds

We understand that it is possible to re-ink Epson cartridges with black stamp pad ink, which is available from stationers. It should therefore be feasible to use the same for yours.

Not so popular

As an avid reader of your magazine I must thank you for covering a wide range of computers The problem is having a not so popular computer like the Tatung Einstein like myself, I find it hard to obtain full use of the magazine Could please run a spot for the not so well known computers, covering a different one each week I'm sure many more people would then be encouraged to write in.

Also, I purchased one of your buggies for my Spectrum which arrived with no instructions A note was included saying they had no instruction sheets and to look in Vol 4 No 11 I sent away for a back issue only to discover none were left So please could any reader sell me the vital issue to allow me to assemble the buggy.

A Herbert
8 Colinton Mains Grove
Edinburgh

The bouncing ball was in!

In defence

I read with nods of approval A B Wright's letter in Issue Vol 5 No 2 defending the Spectrum and celebrating the M1009 Brother printer It is plain that both flourish despite critical denigration of the one and neglect of the other

On the matter of getting Spectrum listings from the M1009, I do not know what interface Mr/Ms Wright is using, but with Interface 1 I have had no difficulties I would write on these lines

```
900 FORMAT "t", 9600 OPEN #3,"b" OPEN #4,"t"
910 PRINT #3, CHR$ 27; CHR$ 82; CHR$ 0,
920 PRINT #3, CHR$ 27; CHR$ 69
930 LIST #4
940 CLOSE #3 CLOSE #4
```

Control codes go through the binary channel and text commands through the text channel as the Interface 1 manual directs Line 910 selects the American character set to give the hash sign as one would want in a listing, although this will lose you the £ sign unless special translation arrangements have been made Line 920 gives emphasised mode which I like for clear listings

The typeface will be pica by default, but "*PRINT #3, CHR$ 27, CHR$ 77.*" or "*PRINT #3, CHR$ 27, CHR$ 15,*" would respectively give Elite or Condensed print if a more compact listing is wanted. The numbers given to channels "b" and "t" are, of course, at the programmer's option.

My Brother manual puts the control character numbers in brackets, but I find the Spectrum wants them in clear as above I hope this may be of help I hope also that Mr/Ms Wright caught N Hankin's splendid machine code screen dump routine for the Spectrum/M1009 combination in your Xmas week Bytes & Pieces It goes like a tram.

G C Watson
29 Chisholm Road
Croydon
Surrey

Impossible

I must agree with Kevin Marks letter in Vol 5 No 2. I've found it impossible to do some fairly standard adventure game techniques such as altering the map during play on Incentive's *Graphic Adventure Creator* Incentive's package is nice to use for simple things but unfortunately most games worth writing need to have some complex problems as well as the simpler ones, otherwise it is too easy

I keep getting half the problem set up, then finding there is no way of completing it – the structure of *GAC* just seems to prevent it.

T Corby
Torquay
Devon

Special Offer

COUPON 3

Here is the third coupon to cut out and add to your card in our Special Offer. Remember, once you have collected all the coupons, you can claim either a free Firebird tape, or Tony Kendle's new *Arcade Champions Guide*

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Writing on the wall

Jeff Naylor kicks off our ST software series – with a look at 1st Word

Atari UK's recent decision to change the software supplied with the 520 ST leaves those with ST's and still waiting with just one major question – how good are the substitutes?

In place of Digital Research's *GemWrite* and *GemPaint*, ST owners are to be given the word processing package *1st Word*, a database entitled *DB Master*, *Doodle*, a graphics program, and *Megaroids*, a game. At the time of writing, all but *Doodle* were ready for release, so there should not be too long to wait (again); will it be worthwhile?

1st Word

Early versions of *1st Word* are being released without printed instructions, but a file called *Readme* informs you how to load and print out the manual, *Guide Doc*, using *1st Word*. *1st Word* preserves the Gem desktop environment, changes the pull-down menus and adds two desktop accessories. One is a table from which you can select characters with the mouse, transferring them to the cursor position in the current document. This may seem like a gimmick but does allow you to use characters not available from the keyboard. In addition, ten labelled function keys are displayed across the bottom of the screen. Neither the character table or function keys can be moved, and remain underneath any windows opened over them.

The pull down menus can be used to select most of the program's features including some allocated to the function keys; these can also be operated by clicking the mouse over key icons.

The first menu is headed by the Atari symbol and gives the same options as *Desk*, including access to the control panel to alter keyboard and mouse response. Next is *File*, which gives a long list of options. *Open* calls the Gem item selector, the initial directory mask is *A.* Doc*, thereby giving you the choice of all the files in drive A with the type part *Doc*. You may select a file with the mouse or enter a new filename.

Entering text into a document window is very straightforward. Cursor keys, *Del* and *Bs* all function and when combined with *Ctrl* they take on extra powers. The mouse is also useful for repositioning the cursor or scrolling the text. Insert mode, word wrap and right justify can all be disabled. Line length, normally 65 characters, can be set as high as 180 if you fancy using horisontal scrolling. Further documents can be opened and positioned in overlapping Gem style, and with reasonably sized documents you can have four open on the desk at the same time.

Other *File* options include *Print*, *Save*, *Save As* (which stores the currently selected document under a new filename), and *Layout*. *Write* gives you the opportunity to save a marked block of the current document to a new file. A major flaw in the program reared its head while using this option. While on all other occasions a file is renamed with a *Bak* type if you try to save another file with the same name, the *Write* option seems to bypass this safety measure. *Read* is the complement of *Write*, loading the contents of the specified file at the cursor positioning the current document.

The next menu is *Edit*. *Find*, *Replace* and *Repeat Find* are fully implemented and there are also four moveable marks, you can dot these at strategic points in the document and then use *Goto Mark* to get there quickly. The *Block* menu allows you to define blocks for other menu options or in order to *Cut*, *Paste*, *Copy* and *Delete* them. The mouse can play a role in block marking. If the text falls completely inside a window then it can be marked by clicking the top left edge and "rubber-banding" to enclose the desired area. The currently marked block is shown as a shaded area.

1st Word – thanks to Silica Shop for the picture

Style is possibly the most interesting menu. You can select your typeface – *Bold*, *Italic*, *Light*, *Underline*, *Super* and *Subscript*, and also *Restyle* a marked block. One of the most pleasant features of *1st Word* is that text is actually displayed in its selected typeface, giving a good impression of the final product. *Reform* is also included on this menu to allow you to tidy up text after editing or changing the page width. The final menu offers help information and can enable *Extra Help* which prompts you through the more complex operations.

Function Keys provide a few extra features – *New Page* forces a page break. On a hi-res monitor page, numbers are marked in the margin. You can also delete lines and use an *Indent*, which indents the rest of the entered text up to the next CR.

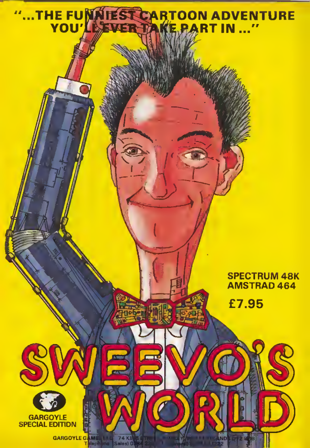
The maximum size of a text file is in the region of 78K – perhaps 8,000 words – but before this you begin to run out of memory for cut and paste operations. A good working size would be around 20 pages of A4 – and you could get four or more such files on one disc.

The *1st Word* disc holds a tutorial file to teach you editing sequences. Other files on the disc are concerned with printer installation – Hex files for common printers to be edited (by *1st Word*) to suit your own printer and then used by an installation program.

Using *1st Word* reveals it to be both friendly and fast, but I do have a few reservations. If you set the keyboard repeat rate to a reasonable speed for cursor movement, you can then get into trouble when deleting lines or indenting paragraphs. GST admits this, implying that Gem does not allow programs to halt keyboard operations while they process a long-winded operation. One function that does seem to take time is moving long distances in the text, but this is only slow by comparison to most other features – reformatting and screen updates are remarkably fast. I also think it odd that a program of this class should lack a word counter.

1st Word is a fine wp package that makes excellent use of Gem, the few untidy ends which I have commented on are most likely the result of a final rush to take the place of *GemWrite*.

Next week, a look at *DB Master One* and *Megaroids*.


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Under a spell

Program *Spellbreaker* **Micro** CBM 64 + Disc **Price** About £33.00 **Supplier** Infocom (Import)

The release of a new adventure from Infocom is always sheer delight for the keen adventurer, and its latest release is superb

Spellbreaker is the last in the *Enchanter* trilogy and is also one of the most difficult adventures I have played

The game starts in the Guild Hall of the Circle of Enchanters amazing text ottly descriptions up to three screens long set the scene, and oh brother are things going wrong

The magic spells cast by your fellow enchanters do not seem to be working anymore, a revolt by the inhabitants seems imminent, unless something is done to correct the situation The meeting is in full swing when suddenly the speaker and everybody else in the room, except you, are turned into frogs, toads and newts, turning quickly you notice a shadowy figure leaving the Hall

Armed with your trusty spellbook you must solve numerous problems in order to collect a number of mysterious white cubes, which will, in turn, help you complete the adventure Some spells can be used many times, others only once, so finding out when and where to use your magic is also part of the game

The vocabularly is massive The parser will accept such commands has "Take the fish out of Belboes ear then eat it" or "Read the scroll. Write "Broken" on it. Open the garbage can and drop scroll into the can"

The game is also rich in humour, casting the mind probe spell at various creatures will reward you with very witty and humourous responses

In conclusion, this is anoth er one of those Infocom adventures worth buying an Atari or Commodore merely in order to play

Roger Garrett

Born again

Program *Deus Ex Machina* **Micro** Commodore 64 **Price** £9.95 **Supplier** Electric Dream Software

Question' What do Frankie Howard, Jon Pertwee and Ian Dury have in common?

Answer They all star in Electric Dream's release of Mel Croucher's haunting fantasy *Deus Ex Machina*, originally by Automata

Automata took a gamble, with *Deus* – with it they were breaking new ground and invested a lot of money in the project which they hoped would lead to a new concept in computer software It was not to be – at £14.95 it was too expensive for the average punter to want to experiment with

So now on a new label, how does the program stand up to the ravages of time? For those of you unfamiliar with it, it comes as a two tape package one the game program, the other a stereo soundtrack. Synchronised by using a countdown sequence the two tapes are used collectively to chronicle the story of one life in an Orwellian society run by computers In a mechanised world where everything is produced according to the rule book, one machine rebelled and decided to produce a baby with its own personality You control its conception, growth, health and death.

The games in the story are very simple and are not graphically stunning but with the soundtrack create a unique experience

A year on it hasn't really dated in any way it's still the same strange haunting package it always was, but even at the cheaper price, it will, I think, only appeal to the minority

Andy Moss

Play bull

Program The *Market* **Micro** Enterprise **Price** £5.95 **Supplier** Entersoft Limited, 37 Bedford Square, London WC1B 3HW

If this title first suggests *Albion Market* to you, look elsewhere However, if your thoughts immediately turn to bulls and bears stocks and shares, you're just the sort of speculator Entersoft are seeking with their stockbroker simulation. But don t buy yet! Consider the potential of your investment

First forget the simulation' tag with a 'Wall Street Crash' on average every four months this would be more safely termed a strategy game As such it's menu driven with initial options such as buying and selling, borrowing from the bank and taking advisors out for £100 meals! Once your initial grand has been spent on your first month's dealing, profits and losses are calculated with at least one company being liquidated to be replaced by another

Is the stock market really so mechanical? I doubt it There isn't even a good game here and you'll need lots of paperwork to keep track of your investments as only one month's previous prices are given – I thought micros were supposed to help with this sort of thing It all looks very Basic-ally written and too dependant on random factors, not at all the sort of program Entersoft should be putting out now they are becoming established for quality The most amusement I got was for the monthly report, 'Enterprise go into liquidation but Commodore are refloated ' Not prophetic, I hope!

John Minson

Battle weary

Program *Austerlitz* **Micro** Spectrum **Price** £9.95 **Supplier** M C Lothlorien 56A Park Lane, Poynton, Cheshire SK12 1RE

Just when some programmers are getting to grips with producing computer wargames that are more complex, more accurate, take longer to play and look sumptuous, Lothlorien have come up with a real throwback

Austerlitz provides a simplified simulation of one of Napoleon's greatest set-piece victories So simplified, indeed, that the most murderous element of any Napoleonic army, the artillery is completely neglected (Furthermore, I might add, I found the play-balance badly skewed against cavalry who seemed unable to charge, shock troops who can't shock, it's shocking)

The French army has been reduced to six corps each of three or four units The map, which is quite small, is in two colours – vigorous blue and radioactive green which, any chic games designer ought to know, together should never be seen

There are, unfortunately, a few problems with the way the game plays First is the way pieces follow move orders Units will often take a circuitous route to objectives for no apparent reason Units under command of corps leaders will often become so tangled up with each other that they go twice as far as they have to

The way in which the Marshalls phrase their questions to Napoleon when they are unhappy with an order is always ambiguous I have yet to work out if 'Yes' means 'follow my order or 'do as you wish'

Bright, quick and entertaining *Austerlitz* may be, rather like Napoleon's victory, but unlike the battles the Emperor fought and won, it is neither testing, accurate nor complex.

Peter Berlin

Kill joy

Program *Rambo First Blood Part II* **Micro** Spectrum **Price** £8.95 **Supplier** Ocean Software, 6 Central Street, Manchester M2 5NS

You've seen the film. You've heard the jokes. And you've possibly already bought this. Yeah – Dumbo, President Ron's favourite fairy tale!

In the game you control geometric genius, Rhomboid, a sprite with a funny walk, who goes around killing lots of people. In short, the old *Commando* plot, but the arcade hit's wholesale slaughter has been replaced with a little strategy. At first it's best to dodge or use a quiet weapon such as the bow, which you find scattered around the jungle along with a lot of other deadly litter. Then it's a B-line to the POWs and the helicopter.

Not that there's anything wrong with this scenario – as long as you ain't no commie pinko faggot – but in play it's all rather dull. Unlike *Rambo*, the movie, there's rather too little frantic blasting, and without that there's just not enough to generate adrenalin the way *Commando* does. And while the Vietnamese jungle is hardly Habitat designed, I'm sure it looks better than this tangle of squiggles. Anyhow, a third of the screen is a status window, which gives the gooks too much of a chance to sneak up on you. Nice music though!

Of course it's all proficient, being Ocean, but unlike *Frankie* – possibly the tie-in's finest hour – this looks like a second hand shoot 'em up but with too little shooting. I'd only play this again if you pushed me.

John Minson

Pot black

Program *Steve Davis Snooker* **Micro** QL **Price** £14.95 **Supplier** CDS, Silver House, Silver Street, Doncaster DN1 1UL.

CDS are one of the larger software houses in the QL market with a conversion of its successful *Steve Davis Snooker.*

This simulated snooker match stays true to all the professional rules of snooker and simulates detailed aspects of snooker used in a real game, such as the amount of spin on the cue ball and the force exerted by the cue.

However, unlike other versions of this program, eg Spectrum, you may play against the computer in different skill levels. The highest level is almost impossible to beat.

The controls are the cursor keys to position your cue and the function keys for special features such as "Editing" the table. At the bottom of the screen, a menu keeps track of all the scores and the information necessary to play.

It would be fair to say that though the game is not original, it still deserves to do well.

Matthew Palmer

Ballderline

Program *Ballblazer* **Micro** CBM 64 **Price** £9.95 **Supplier** Activision, 15 Harley House, London NW1

A strange one this. *Ballblazer* is futuristic football using two "Rotofoils", which roam about a grid playfield trying to hit a ball through two electro goalposts which get narrower each time you score until the mandatory time is up.

There are reams and reams of scene-setting background material in the instructions but they can't hide the fact that the game is too simple and lacks any variation apart from the change in skill level.

There is a two-player option and I suppose the winner is the one who manages to stay awake at the end of it all. Nowadays, as with all games which rely on a one against one scenario, the screen is split showing both players' positions at the same time.

The graphics, what there are of them, are OK and the playfield scrolls quite smoothly, but I can't think of a reason to buy it.

Andy Moss

Man of flint

Program *Yabba Dabba Doo* **Micro** CBM 64 **Price** £7.99 **Supplier** Quicksilva, 222 Regent Street, London

In an astonishing turn of events, a caveman named Fred Flintstone cleared rocks and rubble in order to build a house. Bravely avoiding pterodactyls, turtles and dinosaurs, Fred, picked out rocks and began to fashion his home placing the rocks carefully.

With house completed, our hero takes his car and goes off to win Wilma.

This ancient account by Quicksilva is one of the best games this year. The graphics cartoon quality and animation is brilliant.

As an arcade game it's immensely playable with many locations to explore.

Andy Moss

Ring o' Stars

Program *To Come* **Micro** To Come **Price** £15.95 **Supplier** Melbourne House, Castle House, Castle Yard, Richmond.

In theory the biggest adventure programming task ever. Producing an adventure from *The Hobbit*, a fairly simple story, is one thing – doing the same to Tolkein's huge, complete masterpiece is quite another. It's taken Phillip Mitchell over 18 months to do it (well, the first part anyway – the second part is to be released in a year or so) and the first question must be: Has he managed to recreate the characters in Middle Earth as believable creatures and produce an atmosphere akin to the original Trilogy? The answer is yes, with a few reservations.

Looked at purely in scale, it is vast – full of descriptive text and over 200 locations to explore. This part details Frodo's hazardous trip to Rivendell – the first leg on his long journey to the Fire Mountain, the only place the Ring can be destroyed.

It's an impressive package requiring an enormous box to carry not only the two program cassettes but also the first book *The Fellowship of the Ring* and a manual. The screen display is very pretty, like pages from a book with little graphic heads to signify each Hobbit.

What about the reservations I mentioned? Compared to *The Hobbit*, the response speed is very slow indeed and rather ruins the atmosphere the text evokes – the other niggle is the pictures. I feel most pictures tend to ruin your own mental image of the story; in *Lord of the Rings* they serve no purpose and being rather ordinary in design tend to detract from one's own imagination. It would be nice if you could turn them off.

It must be said, though, that Melbourne House have tried to please everyone here, even down to supplying a beginners program and an extensive instruction booklet.

Andy Moss

Can you remember as far back as 1985? If not, we can jog your memory – with the results of the 1985 Popular Readers' Poll

Firstly a big thank you to everyone who sent in their votes (sorry it wasn't in the centre pages). Last year, the Poll was almost entirely dominated by Ultimate and its offerings, but a year is a long time in computing, and 1985 was very different.

Although we didn't stipulate that you must vote for products released during 1985, we were quite concerned that the software releases at least, should be 'of the Year'.

Program of the Year

(Holder: *Knight Lore* – Ultimate)

This was really a two horse race between Elite and Way of the Exploding Fist, which, as far as you were concerned, stood out among the rest. Even after we discounted Elite votes from BBC owners, who voted for it in large numbers last year, it still managed to pull decisively clear. Just about every Amstrad owner voted for *Sorcery* or *Sorcery Plus*.

1 *Elite* (Firebird)
2 *Way of the Exploding Fist* (Melbourne House)
3 *Sorcery Plus* (Virgin)
Honourable mentions *Marsport* (Gargoyle Games) and *The Fourth Protocol* (Hutchinson)

Incidentally, had we counted *Sorcery* and *Sorcery Plus* as one program, it would have made no difference to the final verdict.

Elite from Firebird

Arcade Game of the Year (Holder: *Knight Lore*)

Always a tricky category, since 'Arcade' can mean anything from The Arcades to graphics/joysticks programs with an adventurish feel. Anyway, we let you decide, and once again *Elite* and *Fist* led the field. This time, *Fist* very nearly caught up.

1 *Elite* (Firebird)
2 *Way of the Exploding Fist* (Melbourne House)
3 *Commando* (Elite)
Honourable mentions *Sorcery Plus* (Virgin) and *Fairlight* (The Edge)

Adventure of the Year

(Holder: *Lords of Midnight*)

A large number of titles were voted for here, but the winner, perhaps surprisingly due to its December release, was never in doubt.

1 *Lord of the Rings* book one (Melbourne House)
2 *The Fourth Protocol* (Hutchinson)
3 *Bored of the Rings* (Silversoft/Delta 4)
Honourable mentions *Marsport* (Gargoyle Games) and *Red Moon* (Level 9)

Business Program of the Year (Holder: *Tasword 2*)

There's no doubting the business use to which home micros are put to the most – word processing; 69% of all votes were for word processors of one kind or another, with *Tasword* in its many guises, being a clear favourite. Gary Gregg claimed that OCP's *Word Manager* 'beats *Tasword* by miles' – not many people agreed with him. Having discounted votes for *Tasword 2* on the Spectrum, and *Mini Office* (Database Publications – and not just a word processor) the picture looked like this.

1 *Mini Office* (Database Publications)
2 *Tasword* (464D, 6128) (Tasman)
3 *Masterfile* (Campbell Systems)

Utility Program of the Year (Holder: *The Quill*)

Despite the number of games designers released this year, it was graphics packages that were 1985's 'in' things, according to Pollsters. But this section produced a clear winner.

1 *The Art Studio* (OCP)
2 *The Artist* (Softechnics)
3 *Graphic Adventure Creator* (Incentive)

Peripheral of the Year

(Holder: Quickshot II joystick)

Not so many joysticks this year, but plenty of modems, although unfortunately there were too many different brands voted for to make much impact on the top three. No doubt about the winner, though.

1 AMX mouse (AMS)
2 Specdrum (Cheetah Marketing)
3 DMP 2000 printer (Amstrad)

Best Software House

(Holder: Ultimate)

Ultimate won this section ridiculously easily last year, and there are still plenty of Ultimate fans out there rooting for the company. This was probably the most closely fought section in the Poll.

1 Melbourne House
2 Ultimate
3 Firebird
Honourable mentions Gargoyle Games and Virgin

Best Programmer

(Holder: Matthew Smith)

Matthew Smith, having lain dormant for much of the year, wasn't really in the running this time. Jeff Minter still commands as loyal a following as ever, but it was nice to see Gargoyle, having been honourably mentioned quite a lot so far, take this one.

Roy Carter and Greg Follis

1 Roy Carter and Greg Follis *(Dun Darach, Marsport)*
2 Denton Designs *(Gift from the Gods, Shadowfire, Frankie, Sweevo's World)*
3= Jeff Minter *(Psychedelia, Cosmic War Toad, Batalyx, Yak's Progress compilation)*
3= Virgin Gang of Five *(Sorcery, Sorcery Plus)*
Honourable mentions David Crane (Activision) and Bo Jangeborg (The Edge)

Most Promising New Company (Holder: Beyond)

Problem here – the company gaining twice as many votes as its nearest rival came fifth in this section last year, and so can't really be described as new. However, we reckoned it was what the pollsters wanted – perhaps Firebird is just taking time to mature?

1 Firebird
2 Imagine 84
3 Electric Dreams
Honourable mentions Rainbird and Odin

Most Overrated Software House

(Holder: Imagine – without the '84')

Surely some connection between this top



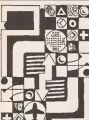
three? For Ultimate, this year's Poll has been very much a case of swings and roundabouts.
1 Ultimate/Play the Game (how mighty are the fallen)
2 Ocean
3 US Gold

Computer Program You Most Regret Buying
(Holders: *War of the Worlds* and *Great Space Race*)
Once again, one person's fave is another's anathema. *Fist, Bored of the Rings, Graphic Adventure Creator, Alien 8*, all furiously nominated by some people. This section turned into a surprisingly close contest.
1 *A View to a Kill* (Domark)
2 *Starion* (Melbourne House)
3 *The Secret Diary of Adrian Mole* (Mosaic)

Most Exciting Computer
(Holder: Amstrad CPC 464)
Another two horse race here – would it be the CPC 6128, in the shops and gaining favourable reviews all over the place, or Commodore's Amiga, technically astounding, but still only available 3000 miles away? In the end, the Pollsters sided with availability.
1 Amstrad CPC 6128
2 Commodore Amiga
3 Atari 520ST
Honourable mentions: Amstrad PCW 8256

Worst Computer
(Holder: MSX)
MSX has made few friends in 1985, if our Poll is anything to go by, although Commodore's ill-fated C16 and Plus/4 made a brave bid for the title
1 MSX
2 Commodore C16
3 Commodore Plus/4

Worst Licensing Deal
(Holder: *War of the Worlds*)
There were so many licensing deals in 1985, it was sometimes difficult to tell what was licensed and what wasn't. The Pollsters were left in no doubt, though. Companies should evidently beware of film tie-ups
1 *A View to a Kill* (Domark)
2 *Ghostbusters* (Activision) (Commodore 64 owners discounted)
3 *Rambo* (Ocean)



FUNCTION PLOT

by E Page

For those of you who are involved with 'O's and 'A's' in Maths, help has arrived in the form of this program which plots the shapes of most functions of the form $y = f(x)$

The program makes use of the EVAL function and will, for example, allow you to plot x^*sinx in a matter of seconds. A useful device for taking the labour out of getting to grips with difficult shapes

The program is 'user friendly' and you should have no problems in plotting your favourite functions. Be prepared to play around with the scales to get the best results.

Pressing *Break* will abort the plot and return you to the start of the prgram.

Program Notes

10-20	REM**
30-130	Function keys are programmed
140	Disable ESCAPE
150	Loop line for repeats, set Mode, switch off cursor
160	Error trap
170-210	Title screen
230-340	Instructions screen (a)
360-540	Examples screen (b)
550-650	Input instructions (c)
670-840	Input function and scaling
850-940	Main program
950-1080	Error statements and repeat instructions
1090-1130	DEFPROCneg
1140-1160	DEFPROCzero-one
1190-1330	DEFPROCpos
1240-1340	DEFPROCaxes
1350-1450	DEFPROCequation
1460-1480	DEFPROCreturn
1490-1530	DEFPROCget-key

```
10REM**E.PAGE**
20REM** C 1985   **
30*KEY0 X-5 |M00 |M MY M-10 MY|M|0 M
40*KEY1 -X-5 |M00 |M MY M-10 MY|M|0 M
50*KEY2 X^2+2*X-15 |M|M|0 MY M-10 MY |M|0 M
60*KEY3 (X-2)*(X+6)*(X+2) |M|M|0 MY M-10 MY|M|M
70*KEY4 1+SINX |M50|M60|MY|M-10|MY |M10|M
80*KEY5 X*SINX*SINX
90*KEY6 X*COSX*COSX
100*KEY7 X*SINX*COSX
110*KEY8 LOG(X)|M50|M600|MN|MN|M60|M
120*KEY9 SQR(100-X^2)
130*KEY10CLS|M|M|M
140*FX229,1
150CLS:CLEAR:MODE7:VDU23;11,0;0;0;0
160 ON ERROR GOTO 950
170PRINTTAB(1,10)CHR$141;CHR$133;"      .. FUNCTIONS. ........!"
180PRINTTAB(1,11)CHR$141;CHR$133;" .  .  .. FUNCTIONS. ........!"
190PRINTTAB(5,13)STRING$(34,"_")
200PRINT TAB(5,20)CHR$130;"PRESS SPACE BAR TO CONTINUE"
210IF GET$=" " THEN 220 ELSE 170
220CLS:VDU23;11,0,0;0;0
230PRINT TAB(3,13)STRING$(30," ")
240CLS
250PRINT TAB(12,4)CHR$129;"INSTRUCTIONS"
260PRINT TAB(1,6)CHR$132;"THIS PROGRAMME PLOTS MOST FUNCTIONS"
270PRINT TAB(1,7)CHR$135;"OF THE FORM Y=F(X) "
280PRINT TAB(1,8) CHR$134;"YOU CAN INPUT YOUR FUNCTION AS:"
290PRINT TAB(1,10)CHR$130,"Y=X^2 2*X-8 OR AS Y=(X+2)*(X-4),etc"
300PRINT TAB(7,12)CHR$133;"VALUES PLOTTED -X TO +X"
310PRINT TAB(6,14)CHR$130;"YOU CHOOSE THE VALUES "
320PRINT TAB(7,16)CHR$131;"NOW BETWEEN  10 AND +10"
330PRINT TAB(6,20)CHR$136;CHR$131,CHR$157;CHR$132;SPC(3);"PRESS SPACE BAR TO C
ONTINUE"
340IF GET$=" " THEN 350 ELSE300
350CLS
360PRINT TAB(8,2)CHR$131;"******EXAMPLES******"
370 PRINTTAB(3,4)CHR$130;"f0=X-5"
380  PRINTTAB(25,4)CHR$131;"(CHAINED)"
390 PRINTTAB(3,6)CHR$130;"f1=-X-5"
400  PRINTTAB(25,6)CHR$131;"(CHAINED)"
410 PRINTTAB(3,8)CHR$130;"f2=X^2+2*X-15"
420  PRINTTAB(25,8)CHR$131;"(CHAINED)"
430PRINTTAB(3,10)CHR$130;"f3=(X-2)*(X+6)*(X+2)"
440  PRINTTAB(25,10)CHR$131;"(CHAINED)"
450PRINTTAB(3,12)CHR$130;"f4=X+SINX"
460  PRINTTAB(25,12)CHR$131;"(CHAINED)"
470PRINTTAB(3,14)CHR$130;"f5=X*SINX*SINX"
480PRINTTAB(3,16)CHR$130;"f6=X*COSX*COSX"
490PRINTTAB(3,18)CHR$130;"f7=X*SINX*COSX"
500PRINTTAB(3,20)CHR$130;"f8=LOG(X)"
510  PRINTTAB(25,20)CHR$131;"(CHAINED)"
520PRINTTAB(3,22)CHR$130;"f9=SQR(100-X^2)"
530PRINT TAB(0,24)CHR$136;CHR$135;CHR$157;CHR$129;SPC(3);"PRESS SPACE BAR TO C
ONTINUE"
540IF GET$=" " THEN CLS ELSE360
550CLS
560PRINT TAB(0,6)CHR$134;"YOU  CAN  USE  FUNCTION  KEYS 0 TO 9 TO"
570PRINT TAB(0,7)CHR$134;"ENTER  DEMONSTRATION PROGRAMMES  OR YOU"
580PRINT TAB(0,8)CHR$134;"CAN TYPE IN YOUR OWN FUNCTION"
590PRINT TAB(0,12)CHR$131;"PRESS SPACE BAR TO RETURN TO EXAMPLES"
600PRINT TAB(0,16)CHR$130;"PRESS TAB TO RETURN TO INSTRUCTIONS"
610PRINT TAB(0,20)CHR$133;"PRESS RETURN TO ENTER THE FUNCTION"
620PROCget_key
630IF K=469 THEN 240
640IF K=620 THEN 330
650IF K=400 THEN 440 ELSE550
660CLS:PROCreturn
670INPUT TAB(0,6)"YOU  CAN  USE  FUNCTION  KEYS 0 TO 9 TO ENTER  DEMONSTRATION
PROGRAMMES  OR YOU CAN TYPE IN YOUR OWN FUNCTION
                                                  Y="A$
675IF A$="" THEN670
680CLS:PROCreturn
690INPUT TAB(0,10)"PLEASE ENTER THE SCALE FOR THE X_AXIS;  THIS SHOULD BE BETW
EEN 50 AND 300"SPC(62),scale_x
700IF scale_x<50 OR scale_x>300 THEN1000ELSE710
710CLS
720PROCreturn
730INPUT TAB(0,10)"NOW ENTER THE SCALE FOR THE Y_AXIS;THIS SHOULD BE BETWEEN 0
(FOR FUNCTION)  TO  300 (FOR SINE CURVES)  SUGGEST 10 FOR   QUADRATICS",SPC(80)
,scale_y
740IF scale_y=0THEN990 ELSE750
750CLS:PROCreturn
760INPUT TAB(0,10)"DO YOU WANT TO PLOT NEGATIVE VALUES OF X(INCLUDING 0)? TYPE
Y OR N"SPC(72),C$
770IF C$="Y" THEN 780  ELSE800
780CLS:PROCreturn
790INPUT TAB(0,10)"ENTER  THE  VALUE  YOU  WANT  FOR  THE  NEGATIVE X_RANGE  P
ROGRAMME  WILL  PLOT VALUES OF  Y  FOR  X=0 TO THE VALUE YOU TYPE IN"SPC(90),N
800CLS:PROCreturn
810INPUT TAB(0,10)"DO YOU WANT TO PLOT FOR  VALUES  OF  X=0TO 1? IF YOU DO TYP
E Y OR N"SPC(70),T$
820IF T$="Y" THEN PROCzero_one ELSE830
830CLS:PROCreturn
840INPUT TAB(0,10)"ENTER  THE  VALUE  YOU  WANT  FOR  THE  POSITIVE X_RANGE  P
ROGRAMME  WILL  PLOT VALUES OF  Y  FOR  X=1 TO THE VALUE YOU TYPE IN"SPC(90),P
850CLS
860MODE1
870VDU23;11,0;0;0;0
880CLS
```

```
890PROCaxes
900IF C$="Y" THEN PROCneg ELSE910
910IF T$="Y" THEN PROCzero_one ELSE 920
920PROCpos
930PROCequation
940END
950CLS:MODE7:VDU23;11,0;0;0;0
960PRINTTAB(0,11)CHR$130;"YOU EITHER HIT A WRONG KEY OR TRIED TO"
970 PRINTTAB(0,13)CHR$130;"CALCULATE THE LOG OF A NEGATIVE NUMBER"
980 PRINTTAB(0,15)CHR$130;"OR NUMBER TOO BIG'":V=INKEY(500):GOTO1010
990CLS:PRINT TAB(13,10)"Y_SCALE=0''":GOTO1020
1000CLS:PRINT TAB(8,12)"X_SCALE OUT OF RANGE''":GOTO 1020
1010COLOUR2
1020PRINT:PRINT TAB(12,23)CHR$131;"START AGAIN""
1030G=INKEY(500):GOTO150
1040CLS:PRINT TAB(13,15)"ARE YOU SURE?"
1050PRINT TAB(14,18)"  Y OR N  "
1060 IF RET$="Y" THEN 1070 ELSE 150
1070CLS:PRINT TAB(12,15)"BYE_BYE FOR NOW"
1080L=INKEY(300):CLS:END
1090 DEF PROCneg
1100FOR X=N TO 0 STEP1/scale_x
1110PLOT69,X*scale_x,scale_y*EVAL(A$)
1120NEXT
1130ENDPROC
1140DEFPROCzero_one
1150FOR X=0 TO 1 STEP1/scale_x
1160PLOT69,X*scale_x,scale_y*EVAL(A$)
1170NEXT
1180ENDPROC
1190DEFPROCpos
1200 FOR X= 1 TO P STEP1/scale_x
1210PLOT69,X*scale_x,scale_y*EVAL(A$)
1220NEXT
1230ENDPROC
1240DEFPROCaxes
1250GCOL0,2
1260PRINT TAB(19,1)"Y":PRINT TAB(0,15)"X"
1270 MOVE640,0:DRAW640,1024:MOVE1280,512:DRAW0,512
1280VDU29,640;512;
1290FOR S=-500 TO 500 STEP 100:MOVES,0:DRAWS,10:NEXTS
1300FORW=2 TO 640/scale_x STEP 2
1310PRINTTAB(20,16)"0"
1320 PRINTTAB(20+INT(W*20/(640/scale_x)),16);W:PRINTTAB(18-INT
(W*20/(640/scale_x)),16);-W
1330NEXT W
1340ENDPROC
1350DEFPROCequation
1360COLOUR 1
1370VDU19,1,2,0,0,0
1380PRINTTAB(1,25)"Y="A$
1390PRINT TAB(1,26)STRING$(LEN(A$)+2,"_")
1400COLOUR3
1410PRINT TAB(11,31)"THEN PRESS RETURN"
1420COLOUR2
1430INPUT TAB(4,28)"WANT ANOTHER GO? TYPE Y OR N",;E$
1440IF E$="Y" THEN 120 ELSE 1040
1450ENDPROC
1460DEFPROCreturn
1470PRINT TAB(7,20)CHR$134;"THEN PRESS RETURN"
1480ENDPROC
1490DEFPROCget_key
1500REPEAT
1510K=GET
1520UNTIL K=120 OR 609 OR 608
1530ENDPROC
```

Name: Philip Mitchell

Programmer of The Hobbit and Lord of the Rings

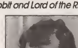
"I can't remember the first computer I ever used, but it was a very small machine and we built it at high school. It was based on a now defunct chip, the Philips 2650 That was about nine years ago

I had some courses in programming in Fortran and then taught myself assembly language Whilst at Melbourne University, I saw an ad for a part-time programmer at Melbourne House – I've been there ever since

I don't really think there is an easy way for a newcomer to learn assembly language You have to be prepared to persevere

When developing programs, I mainly use a number of packages developed in house In particular we have drawing programs and write editors for the Commodore 64 Most of the utilities I use are concerned only with graphic development.

At home I have a Spectrum, an IBM PC-XT, and a machine I built myself which is really a Tandy model I in disguise It's hard to comment on the work of other programmers because being in Australia, I am rather out of touch with the latest developments, but I have enormous respect both for the way *Manic Miner* was done and the imagery that went into *3D Ant Attack*.



The best thing I've done is *Lord of the Rings*, though it was a team achievement – it represents a big effort on everyone's part. Certainly *Lord of the Rings* is the best adventure game Melbourne House has released."

Name: Philip Mitchell

Age: 28

Favourite Programs:

The best adventure I ever saw was *Classic Adventure* and I still rate it. I also like *Zork*, although I don't get much of a chance to play adventures I'm not co-ordinated enough to play arcade games, but I've always liked *Manic Miner*

Favourite Machines:

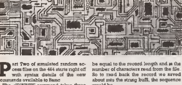
I don't rate any machine particularly, it all depends on what you want to do For games, the Commodore 64 is probably best. For an all round general purpose machine, the Amstrad would be my choice

Softography

Hobbit, *Sherlock*, *Lord of the Rings*, *Mugsy*, *Penetrator* and *Melbourne Draw*

Hobbies

At the moment I'm planning my wedding My fiancée is an outdoor sort of person so a lot of my spare time is spent on beaches or skiing and rock climbing



RANDOM ACCESS

by Brian Cadge

Part Two of simulated random access files on the 464 starts right off with syntax details of the new commands available to Basic.

The :IDWRITE command takes three parameters, these are, the filename, the offset at which to start writing in the file, and the string of characters to be written. The offset is usually the record number less one, times the record length. For simplicity, I suggest you always use a function similar to *FNr* in the demonstration program.

The number of characters written is taken from the length of the buffer string, this is why it must be padded out to the record length. A typical :IDWRITE command might look like this;

f$ = "PCW01.DAT"

buf$ = "The text to go to the file, padded to the rec len"

:IDWRITE, @f$, fnr(2), @buf$

This would write out record two. Obviously records can be written out in any order.

The :IDREAD command has the same syntax as the :IDWRITE command, that is, filename, followed by offset at which to start reading, followed by buffer string. In this case the buffer string must be equal to the record length as the number of characters read from the file. So to read back the record we saved about into the string buf$, the sequence would be,

buf$ = string$(rec len, 32)

:IDREAD, @f$, fnr(2), @buf$

If this all seems rather complicated it will become much clearer by studying the demonstration program (printed last week). A final point to the Basic user, a number of errors can occur, if, for instance, you try to read a record number outside the range of the file, or you give the wrong number of parameters to a command. In each case a clear error message is printed and the program halts with no error number 31. Basic calls this an Unknown Error, and as it never normally occurs, you can check for it in your error trapping routines. The files created by the *Create* command can be erased as normal using the *ERA* command. It is not advisable to try and read them using the normal INPUT#9, as there are no 'CR' characters at the end of a record, and unpredictable effects may occur.

The assembly language listing is included to illustrate how the program actually works. It should be of interest to anyone who wants to use the DOS from machine code, as it demonstrates reading and writing files, as well as using the Amsdos RSX's from machine code (eg, ERA, REN and DISC). The source code is commented and should be fairly straight forward to understand. The method of simulating random access is to use Amsdos serial files, which are opened, read or written to, and closed within each command. A *DWRITE* command actually creates a temporary file called "TEMP RAN" which is never seen by the Basic user as it is deleted before returning to Basic. This simulated random access is not quite as fast as true random access files, but the latter would be very difficult, if not impossible, to implement using Amsdos. However, the method used is much quicker and compact than trying to simulate random access from Basic.

The technique used to return an error to the Basic is to load the E register with the error number required, and then to call the error routine in the Basic Rom directly by its physical address ($CA94), having first selected and enabled the Basic Rom.

```
[illegible]
```

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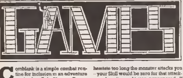
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COMBLANK

by Hugh T Walker

Comblank is a simple combat routine for inclusion in an adventure to simulate Role Playing Games more closely than either pure puzzle or pure combat games do on their own. *Comblank* will not Run on its own and is designed to be used with *Adblank*, the adventure generator program which appeared in *Popular Computing Weekly*, Vol 4, Nos 42 and 43. Line 5140 of *Comblank* replaces that of *Adblank* and you should *Merge Comblank* into *Adblank* rather than vice versa. The listing contains all the routines required to support the Combat system, including a sample of monsters and verb routines to restore Stamina when not in combat (Eat & Rest)

The Combat System is called whenever you are in the same location as an enemy; an alarm message and siren heralds the onset of combat. You have the option to Attack or Run, but if you hesitate too long the monster attacks you – your Skill would be zero for that attack-round as it caught you unprepared. If you press "A", your Skill is set to the value of your current Skill attribute. The outcome of each round is determined by the winner of Monster's Skill + 2 Dice against your Skill + 2 Dice. The loser sustains 2 points loss of Stamina. You may reduce this damage by accepting the option to Test Your Luck. This compares your Luck attribute with 2 Dice but also reduces your current Luck attribute for future tests.

Combat continues until one of you is dead or you successfully run away. If you press "R" you may escape if you have not already run away five times and if your Luck attribute is high enough. If you run away repeatedly you may lose Skill and Luck. If you do escape the monster gets a free hit, you lose 1 or 2 points Stamina, depending on your Luck level, you then move to the Last Location (LL) visited

Line 4008 alters the Look routine by detecting the presence of an enemy before the full location description is given. Thus you do not discover what you find until you have dealt with your adversary

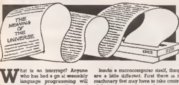
A victory gains you treasure and replenishes your stock of food if this has fallen below six meal's-worth.

The combat system takes no account of weapons or defences carried. Of attack the Skill value could be reduced if no sword is carried, or the damage incurred by a blow could be increased if no shield is carried.

As with *Adblank* this program gives a skeleton framework on which to build your system and it is the minimum algorithm for a 'realistic' combat

Next week, Part Two of the Listing, plus full program notes

```
  10 GO TO 6e3
  20 DEF FN D()=INT (RND*6)+1 REM throw dice
  30 DEF FN L()=FN D()+FN D()<=H(2) REM test luck
  40 DEF FN R(X)=INT (RND*X)+1. REM random number generator
 499 REM ************************
 500 REM ***  UPDATE  STATUS  ***
 501 REM ************************
 610 FOR F=1 TO 3
 615 IF H(F)<1 THEN LET H(F)=0
 620 IF H(F)>I(F) THEN LET H(F)=I(F)
 630 NEXT F
 640 LET DD=NOT H(3) REM zero stamina = DEATH!!
 650 IF NOT CB THEN RETURN
 699 REM ************************
 700 REM ***  PRINT  STATUS   ***
 701 REM ************************
 710 IF CB THEN PRINT AT 18,0,
 720 FOR F=1 TO 3
 730 PRINT H$(F),H(F),H$(F+3),H(F+3)
 740 NEXT F  RETURN
1040 LET CB=0. GO SUB 600. IF DD THEN GO TO 7100
1050 IF H(LC) THEN GO TO 5000 REM combat
4008 IF DD OR H(LC) THEN GO TO 4040
4350 REM ***eat***
4355 IF NOT H(4) THEN PRINT "YOU HAVE NO FOOD". GO TO 1E3
4360 PRINT "YOU ENJOY A HEARTY MEAL"
4365 LET H(4)=H(4)-1 REM decrement RATIONS
4370 LET H(3)=H(3)+2 REM increment STAMINA
4375 IF RND>.5 THEN BEEP .4,-45 PRINT "PARDON!"  IF RND>.8 THEN LET H(LC)=FN R(NOM) REM Bad manners attracts monsters!!!!!
4380 GO TO 1E3
4400 REM ***status***
4410 GO SUB 700, GO TO 1E3
4450 REM ***rest***
4455 FOR F=1 TO 6
4460 PRINT "ZZZZZ ", REM snores
4465 BEEP .75,-50  BEEP .02,-48
4470 PAUSE 26  NEXT F  PRINT
4475 IF RND>.8 THEN LET H(LC)=FN R(NOM) REM snores awaken monsters
4480 LET H(3)=H(3)+1
4490 GO TO 1E3
4999 REM ************************
5000 REM ***  SET UP COMBAT   ***
5001 REM ************************
5010 PRINT ''"CLUMSY OAF!  YOU HAVE ANNOYED  ", FLASH 1, PAPER 2,"SOMETHING";. PRINT "!! WITH YOUR NOISE!!"
5020 RESTORE 9900+H(LC)  READ M$,MSK,MST REM monster DATA
5030 FOR F=1 TO 25  BEEP .03,10 BEEP .01,0  NEXT F REM alarm
5040 GO SUB 100
5050 PRINT TAB 9,"!! COMBAT !!", TAB 9,"============"
5060 PRINT AT 0,0;"________________________________"
5070 PRINT AT 16,0,"________________________________"
5080 PRINT '"YOUR STATUS"
5090 LET CB=1
5099 REM ************************
5100 REM ***  FIGHT MONSTER   ***
5101 REM ************************
5110 PRINT AT 3,0,"YOU ARE CONFRONTED BY A VERY''"ANGRY LOOKING ",M$,
5120 PRINT AT 6,0,M$," STATUS"
5130 PRINT H$(1),MSK," ",H$(3),MST," "
5140 GO SUB 500
5150 IF NOT MST THEN GO TO 5000 REM monster is dead
5160 IF DD THEN GO TO 1E3 REM you are dead
```



INTERRUPTS

by Eric Deghaye

What is an interrupt? Anyone who has had a go at assembly language programming will have come across the term 'interrupt' but maybe never have quite grasped its full meaning. What exactly then is an interrupt?

Eating your lunch can be seen as a sequence of instructions, but the telephone ringing is not part of the program as it has been caused by someone else ringing The interesting part though is when the phone rang, you stopped executing the program 'eat lunch' to execute the program 'answer phone'. When the conversation is over you carry on with your lunch where you left it

Now what has all this lot got to do with the 6502? The more aware reader will have noticed that the 6502 chip has two pins labelled NMI and IRQ (their correct name will be revealed later) These pins are the 'telephone bells' of the example above. When the 'phone rings' over one of these lines, the processor finishes the instruction it is currently doing, goes to another program, executes it, than comes back to the previous program and carries on.

I hear you all say 'Nice, but what's it for?' Well, one of the uses of microprocessors beyond zapping aliens is to control external devices We could have a microprocessor controlling a machine with a fixed program But, say if the machine overheats, or something else happens, this can be used to trigger an interrupt line, and cause the microprocessor to go to 'plan b' and do the appropriate action So it is some form of external control over the execution of a program.

Inside a microcomputer itself, things are a little different. First there is no machinery that may have to take control of the microprocessor, and a computer has a lot of things to think about. In fact most micros use the interrupts in a slightly different way. The circuitry inside the computer causes several interrupts per second, so the computer is continuously jumping between several programs, thus tricking the user into believing that two or more programs are running in the same time So how does it work?

There are two interrupts on the 6502. One is called Non Maskable interrupt (NMI) and Interrupt Request (IRQ) They are identical except for one point The IRQ can be disabled by setting the interrupt disable bit with the command SEI, whilst NMI cannot be disabled at all, and in the event that both interrupts occur at the same time, NMI has priority About 60 times per second an interrupt occurs and the processor finishes the instruction it is currently doing, pushes the return address on the stack (ie, the address where the program was left) and jumps to the interrupt service routine. When the instruction RTI (Return from interrupt) is encountered, the return address is pulled from the stack and execution of the normal program continues

The vectors for the interrupt routines (a vector is the address of a routine stored in memory) are found in the interrupt vectors. The location of these is always fixed at the following addresses for any 6502 machine

NMI $FFFA-FFFB Points to $FE43
IRQ $FFFE-FFFF Points to $FF48

On the C64 these point for IRQ to $FF48 and for NMI to $F4E3 Their equivalent can be easily found for other machines by peeking at the addresses mentioned above These locations contain the address of a routine which will be executed when an interrupt occurs On the Commodore, the routine is merely a glorified jump to another routine, however it makes our life easier because the jump address is another vector that can be changed easily to point to our routines The secondary vectors are located at.

IRQ $0314-0315 (points to $EA31 normally)
NMI $0318-0319 (points to $FE47)

Using the interrupts is a pretty simple thing then. All we need to do is to change the secondary vectors so that they point to our routine and at the end of our routine, do a jump to where the interrupt normally goes There are three commands associated with handling interrupts, they are

SEI Set interrupt disable bit – after execution of this command the IRQ interrupt is disabled.

CLI Clear interrupt disable bit – re-enable IRQ interrupt) NMI interrupts cannot be disabled hence the name)

RTI Return from interrupt – similar in operation to RTS but use with care or the operating system interrupts will not occur and problems may arise

Enough for words now, Example one is a demonstration program written for the

```
10 REM BASIC L STING FOR INTERRUPT EXAMPLE 1
20 :
30 :
40 INC=0
50 BASE=20480
60 READ A:IF A=-1 THEN SYS 20480
70 POKE BASE+INC,A
80 INC=INC+1 : GOTO 60
90 :
95 :
100 DATA120,169,13,141,20,3,169,80,141,21,3,88,96,238,32,208,76,49,234,0
110 DATA0,-1,-1,-1
```

64. Once SYS 20480 has been typed, the border colour will change about 60 times per second, enough to drive the sanest of persons mad

The program should be portable on to other machines such as the BBC, all one has to do is to find the correct addresses of the vectors and the colour code location.

The first part of the program changes the vectors to make them point to our routine instead. Notice that the interrupt is disabled before the addresses are changed, if this was not done an interrupt may occur whilst only half the address were changed so it would point to the wrong address, and eventually crash the computer

Once the interrupt is re-enabled, every time an interrupt occurs our routine will be executed before the normal routine All it does is to add one to the border colour code, thus changing the colour.

The result is highly entertaining, but enough to send you to mental hospital after prolonged exposure

To demonstrate the concept of interrupt, play with the keyboard while the colours change furiously It works as well, you can actually type a program in Basic

A little exercise try and change this program to make it change the screen as well as the border colour (Hint – the screen colour address is $D021, you only need another program line) Another possibility is to replace the address $D021 with $0286 This is the character colour location, and doing this will result in some rather colourful listings

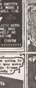
More examples of interrupt on the Commodore next week

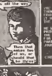
```
100 '------------------------------------------
110 '
120 '      INTERRUPT EXAMPLE 1
130 '
140 '------------------------------------------
150 '
160 '
170 IRQVECA      =  $0314              'LSB OF IRQ VECTOR
180 IRQVECB      =  $0315              'MSB -- --
190 RETPOINT     =  $EA31              'NORMAL INTERRUPT ROUTINE
200 COLOUR       =  $D020              'BORDER COLOR CODE
210 '
220 *=$5000
230 '------------------------------------------
240 'CHANGE THE VECTORS
250 '------------------------------------------
260 '
270              SEI
280              LDA £<ROUTINE          'CHANGE THE IRQ VECTOR SO
290              STA IRQVECA            'THAT IT POINTS TO OUR
300              LDA £>ROUTINE          'SUBROUTINE
310              STA IRQVECB
320              CLI
330              RTS
340 '
350 '
360 '------------------------------------------
370 '     THE MAIN ROUTINE
380 '------------------------------------------
390 '
400 '
410 ROUTINE      INC COLOUR
420              JMP RETPOINT
430 '
440 'ALL WE DO HERE IS SIMPLY TO ADD 1
450 'TO THE COLOUR CODE AND JUMP TO
460 'THE NORMAL INTERUPT ROUTINE
```

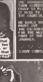
The Rogue Program















On the run

Following considerable numbers of pleading letters on the subject I have no doubt that there will be loud cheers of relief and delight with the publication of this set of Pokes for the Spectrum *Monty On The Run* sent in by Paul Miller. Despite being 'just another platform game' MOTR is full of fun and nice touches that make it one of the best recent buys, but it is also fiendishly difficult in places Owners of CBM and Amstrad machines (for which the conversion of the game should be out this month), do not despair – we will have more help on the game in our Arcade Champion's special together with tips on *Sweevo's World, Marsport, Back To Skool, Rambo* and a whole host of other top selling recent releases.

Paul has also given this routine for the Firebird cheapie *Don't Panic* – run it and then load the game.

10 *Clear* 23999 *Load* ""*Code* 16384
20 *Load* "" *Code*
30 *Poke* 24195,0 . *Poke* 27824.0
40 *Randomise Usr* 25410

Sticking for a moment with high class cheapie games Peter Millar of Aberdeen has sent some pokes for *Spellbound*, David Jones's superb follow up to the very popular *Finders Keepers*

To get the pokes in *Clear* 28000 then *Load* ""*Code*. When the game has loaded *Poke* 27871 0 to stop strength loss when walking To stop strength loss in the Odd Ball Room *Poke* 36133 0 Finally *Randomise Usr* 26643 to start.

Pete also mentions that there is a different *Randomise* number that can be read if you *Merge* the Basic loading program – if you use this you get a neat little message for hackers As Pete says "*Spellbound* is a super game and it's nice to see a successful programmer who isn't stopping us amateur hackers from having a lot of fun "

It's very rare that we hear from Memotech owners in the column but hopefully that will change following the company's massive price cuts The machine now represents tremendous value for money, and is really a first class product There has also been a considerable increase in the standard of available software with the release of the Speculator Spectrum emulator and some very nice new releases from a relatively new company Megastar games. They are an independent set-up but, anyone wishing to contact them should write care of Memotech, Station Lane Estate, Witney, Oxon

Anyway, to get back to the point, we have had a letter from none other than the bizarrely named 'Owd Gest of Accrington' who has discovered the familiar keypress routines for jumping to any screen on the MTX version of *Manic Miner* For example keys 2 and 8 together take you to the *Menagerie*, 5 and 6 to the *Warehouse*, 1,2,3,4,7,8, 9,0 to the *Sixteenth Cavern*, 2, 3,4,7,8,9 to the bank. We have seen similar things many times before but it's worth reminding new Memotech owners

I've had another crop of letters from people stuck in the convoluted problems of Hewson's *Dragontorc*, including some from new Amstrad owners To let everyone out of their misery we have decided to serialise the complete solution, thanks to help from Hewson. As with our *Castle Quest* solution we will give you ample warning each week so that you needn't read the answers unless you want to, just keep the relevant issues until you are really stuck

You begin the game of course in Wispwood. Use the *Bane* spell here to kill the wisps Take the M seal and open the stones with it Leave it in the stone circle to take to Webwood later Use the *Servant* to give the bow to the elf. Search the pool and give the jewel you find to the elf. In return get the golden sickle and a message Find Merlyn's Cave in Webwood Use the sickle to cut the herb, this gives you the *Energise* spell. Search the hole to get the *Missile* Stand on hole to drop to the next level.

You will now be in the Vaults of Locris for the first time Go right to the teapot room, search the pot with the servant to find the rune Go to fireball/stool room. Touch stool with servant then leave by the rearmost of the two adjacent doors Avoid skeletons, go through back door, take spell, leave by other door *Missile* skeletons as they appear and take chalice Go left then back right through frontmost door to pool room.

Kill skeleton and dip chalice in pool Leave by other exit – go right, take back door in fireball room, go right till in pedestal room Put chalice on pedestal, take the *Heal* spell, sit on pedestal for more energy

Tony Kendle

```
10 REM MONTY ON THE RUN POKES
20 REM
30 REM By Paul M ler @1985
40 REM
50 CLEAR 39999
60 LET Screen 1  ET L ves=5
70 LET Tot=0
80 FOR I=40000 TO 41000
90 READ J
100 IF J=999 THEN  GO TO 130
110 POKE I,J  LET Tot=Tot+J
120 NEXT I
130 RANDOMIZE USR 40000
    REM Run Code
140 STOP
1000 DATA 221,33,12,248 1 5,1
1010 DATA 62,255,55,205 86,5,48
1020 DATA 241,62 79,50,71 240
1030 DATA 62 83,50 75 240 62 13
1040 DATA 50 86 240,62,249 50
1050 DATA 57 240,62,7 50,234
1060 DATA 248 34 1,0,156 17,13
1070 DATA 249 1 0, 232 126,195
1080 DATA 32,240,32 27,219 17
1090 DATA 0 64 1 0,  232 176
1100 DATA 195 0 64 33 255 247
1110 DATA 17,255 255 1,0 165
1120 DATA 237, 84, 4,255,95
2000 REM
         INFINITE LIVES

2010 DATA 62 155,50,46,157
2020 DATA 62,24,50,156,135
2030 REM
         CRUSHERS DON'T KILL

2040 DATA 62,201,50,141,134
2050 REM
         SCREEN = START SCREEN

2060 DATA 62,SCREEN,50,170,152
2070 REM
         WALK THROUGH MONSTERS

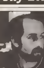
2080 DATA 62,201,50,157 143
2090 REM
         WALK ON WATER

2100 DATA 62,0,50,83,154
2110 REM
         LIVES = NO. OF LIVES

2120 DATA 62,LIVES,50,127,152
2130 DATA 195,55,165,999
```


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Tony Bridge's Adventure Corner



Club ventures

Since the mention in The Corner of adventure clubs, several readers have written expressing interest, but worried by the example set by earlier clubs (who, more often than not, took the money of would-be subscribers and quietly disappeared).

I think that those have largely fallen by the wayside, and experience of more recent ventures leads me to believe that your money will be fairly safe with any of those mentioned in The Corner of Vol 5 No 2. In fact, The Adventure Club Ltd offer a 'money-back' guarantee if you don't like the club's magazine or the services it provides. The prices that I quoted were wrong; £10.95 will get you a year's sub.

I've mentioned *Orcsbane* before, but this seems to be getting underway quite well now. It's really a fanzine, rather than a club in the same way as the others mentioned earlier, but it's great value at just 50p a copy. Subscribe for a year (which equals four issues) and you're also entitled to a monthly, free newsheet called *Babbs*. The latest issue has something like 38 pages, full of interesting articles from readers and Nick Walkland, the Editor. He's a student, though I hope his work doesn't depend too largely on English grammar and spelling, and obviously loves adventures.

Much of the artwork seems to have been purloined from other sources, so if you are a dab hand at drawing, do Nick a favour and send him some jottings, if only to save him from lengthy incarceration or litigation (apart from which, if it's used, you get a free issue).

The Adventurer's Guide (the names get confusing) is just a few pages long, and doesn't contain so much of interest to readers. But it does have a Swap department, potted reviews and hints 'n' tips as well as a phone-in Helpline on (0423) 711819, ask for Paul Hawksworth. The membership is growing quite well now, again the address of TAG is at the end of The Corner.

Further afield

To round off this discussion of clubs although I'll return to the subject later in the year, one or two readers seem to think I am a club! I've been described as many things, blunt instruments among them, but never a club, so I point those people in the direction of those outfits which have been mentioned over the past couple or so weeks.

It's time to say hello to adventures from further afield (despite the protestations of certain xenophobic readers). Douglas Jeffery actually travels over 1000 kilometres to get his copy of *Popular*, and believes that he is the only person in the area (British Columbia, Canada) to own a Spectrum – so when he gets stuck in an adventure, he can't nip next-door for a spot of help!

He is having trouble with *Mountains of Ket*; get the food from the guard room, Douglas, and feed the dog. Now take the dog to the entrance cave and chain it up – get the wand and return to the dog, where you must drop everything you are carrying. I'll leave you to figure out the next moves, but soon, you will need to know that there is a popular sweet in Britain known as Polo, 'the mint with the hole'. I also advise saving as often as possible.

If you'd like to know more, try writing to Tom Frost (with a SAE), Tom was the first adventurer to solve the Trilogy, thus winning the award. He can be contacted at The Links, Montrose, Angus, Scotland, while Douglas lives at Larch Rd., RR#1, Telkwa, BC, Canada, VOJ 2XO.

Tom Frost wrote to me recently partly to praise The Adventurers Club (see the start of this Corner), considering it money well spent. The gap left by the demise of *MicroAdventurer* has been well and truly filled'. He also draws my attention to the routine I published some while ago to bypass the arcade section of *Eureka!* 'It only works', he says, 'on the side of the tape with parts 1, 2 and 3. On the other side, it apparently corrupts the acceptance of a numeric input, so that in Germany you cannot open the safe, and in the Carribean you cannot open the door with the numeric keypad.' Aaah, they got us in the end!

Dashing back abroad again, Matteo Vaccari from Italy is a student of Computer Science at Milan University, and is interested in corresponding with anyone with knowledge of MUD-like, multiple-player adventures, for his degree thesis. Apparently, Richard Bartles, one of the founders of MUD, has been very helpful to Matteo, sending him papers and hints on the subject, but now, he needs to know more. If you're also interested in the subject, write to Matteo at: Via Sudorno 23, 24100 Bergamo, Italia.

MUD insight

Maybe Bella the Witch can help him – he (actually Alan Lenton) wrote to me some time ago offering his insight to non-Commodore MUDers (Compunet users have their own Mudspot, and Alan, kind witch that he is, wants to redress the balance somewhat). Write to him at 38 Green Dragon Lane, Brentford, Middlesex.

Finally, I've been taken to task by someone closely involved in the development of the Latin used in *Eureka!* – he says that 'Cave equis' (as in the adventure) is indeed the correct translation of 'beware of the horses', and that my feeble and misguided proposition, 'cave equi', actually translates as 'beware of (something) belonging to a horse'. Of course, I forgot that, in this instance, the verb 'caveo' must take the ablative case or perhaps, as you will know, the accusative. My apologies all round (and why didn't some of you others spot it, hey?) – *Cave pontus*, is all I can say!

Orcsbane Nick Walkland, 84 Kendall Road, Sheffield S6 4QH.

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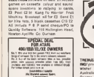
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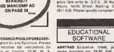
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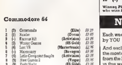
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2	(1)	Rambo	(Ocean)	£8.95
3	(–)	Koronis Rift	(Activision)	£9.95
4	(3)	Winter Games	(US Gold)	£9.95
5	(4)	Last V8	(Mastertronic)	£2.95
6	(–)	Mercenary	(Novagen)	£9.95
7	(4)	Little Computer People	(Activision)	£9.95
8	(9)	New Games 2	(Virgin)	£8.95
9	(8)	Fight Night	(US Gold)	£9.95
10	(–)	Kik Start	(Mastertronic)	£1.99

Spectrum

1	(3)	Commando	(Elite)	£7.95
2	(2)	Rambo	(Ocean)	£7.95
3	(1)	Winter Games	(US Gold)	£7.95
4	(4)	Yie Ar Kung Fu	(Imagine)	£7.95
5	(5)	Spellbound	(Mastertronic)	£2.99
6	(6)	Saboteur	(Durell)	£8.95
7	(7)	Elite	(Firebird)	£14.95
8	(10)	They Sold a Million	(Hit Squad)	£9.95
9	(–)	Daley Thompsons Super Test	(Ocean)	£6.95
10	(–)	Back To School	(Microsphere)	£6.95

All figures compiled by Gallup/Microscope

Top Twenty

1	(2)	Commando *(Spectrum/C64)*	**Elite**
2	(4)	Yie Ar Kung Fu *(Various)*	**Imagine**
3	(1)	Rambo *(Spectrum/C64)*	**Ocean**
4	(3)	Winter Games *(Spectrum/C64/Amstrad)*	**US Gold**
5	(5)	They Sold A Million *(Spectrum/C64/Amstrad)*	**Hit Squad**
6	(7)	Formula One Simulator *(Spectrum/C64/Amstrad)*	**Mastertronic**
7	(6)	Way Of The Exploding Fist *(Amstrad/Various)*	**Melbourne House**
8	(15)	Finders Keepers *(Spectrum/C64/Amstrad/MSX)*	**Mastertronic**
9	(5)	Computer Hits 10 *(Various)*	**Beau Jolly**
10	(14)	BMX Racers *(Spectrum/C64/C16)*	**Mastertronic**
11	(11)	Action Biker *(Spectrum/C64/Atari)*	**Mastertronic**
12	(10)	Spellbound *(Spectrum/Amstrad)*	**Mastertronic**
13	(8)	Elite *(Spectrum/C64/BBC)*	**Acornsoft/Firebird**
14	(–)	Koronis Rift *(C64/Atari)*	**Activision**
15	(16)	Now Games 2 *(Spectrum/C64)*	**Virgin**
16	(20)	Mercenary *(C64/Atari)*	**Novagen**
17	(12)	Transformers *(Spectrum/C64/Amstrad)*	**Ocean**
18	(21)	Big Mac *(C64/C16)*	**Mastertronic**
19	(28)	Rockman *(Spectrum/C64/C16/Vic 20)*	**Mastertronic**
20	(19)	Arcade Hall of Fame *(Spectrum/C64)*	**US Gold**

Figures compiled by Gallup/Microscope

Readers' Chart No 58

1	(1)	Elite *(Spectrum/C64BBC)*	**Firebird/Acornsoft**
2	(2)	Commando *(Spectrum/C64)*	**Elite**
3	(3)	Winter Games *(Spectrum/C64)*	**Epyx/US Gold**
4	(7)	Lord of the Rings *(Spectrum/Amstrad)*	**Melbourne House**
5	(6)	Yie Ar Kung Fu *(Spectrum/C64/Amstrad/BBC/MSX)*	**Imagine**
6	(4)	Monty on the Run *(Spectrum/C64)*	**Gremlin Graphics**
7	(10)	They Sold a Million *(C64)*	**US Gold**
8	(5)	Way of the Exploding Fist *(Spectrum/C64/Amstrad/BBC)*	**Melbourne House**
9	(–)	Little Computer People *(C64)*	**Activision**
10	(–)	Saboteur *(Spectrum)*	**Mastertronic**

Winning Phrase No 58 "EEC enema Westland migration", from P Salmon of Shoreditch, London, who wins £25

Now voting on week 60 – £25 to win

Each week *Popular* is compiling its own special software top ten chart – compiled by YOU

And each week we will send £25 to the person who sends in, with their chart votes the most original (witty, neat or clever – but never rude) phrase or sentence made up from the letters (you don't have to use them all) in the titles of the top three programs in this week's Readers' Chart, published above

You can still vote in the chart without making up a slogan – but you won't be in with a chance of winning the prize

All you have to do is fill in the form below (or copy it out if you don't want to damage your magazine) and send it off to Top 10, *Popular Computing Weekly*, 12-13 Little Newport Street, London WC2H 7PP

Voting for Week 60 closes at 2pm on Wednesday January 29, 1986. Entries received after that time will not be eligible for inclusion in that week's voting. The judges decision is final. Only one entry per individual per week will be allowed.

Name ....

Address ....

....

....

My phrase is: ....

My top 3: Voting Week 60

1..............................

2..............................

3..............................

New Releases

EXOTIC

My favourite peripheral of last year was, by a wide margin Specdrum from Cheetah Marketing. For under £30 you got a very well designed, flexible system which gave you the equivalent, using sampled sounds of a drum machine costing, say, a couple of hundred

Proof of the flexibility of the system and of Cheetah's good intentions towards supporting the unit is the Specdrum Latin Kit and Kit Editor. This is a piece of software, to be used with the system which replaces the supplied drum sounds with those of a Latin American Kit

Exotic sounds like timbale, cabasa, stick and tamborine together with hand cowbell, another snare and another kick drum can be loaded into the Specdrum system and played in the same way as the original kit.

The Kit Editor is on the second side of the tape – this lets you ease individual sounds from different kits. More than that it lets you use some of the sounds backwards for unusual effects

True to the ultra cheap tradition of the Specdrum the cassette costs a mere £3 99 and Specdrum owners won't need my recommendation to rush out and buy it. PS Is there anyone out there with a simple and cheap way of linking the thing in to Midi?

Program *Specdrum Latin Kit*
Price *£3 99*
Micro *Spectrum*
Supplier *Cheetah*
1 Willowbrook
Science Park
Crickowell Road
St Mellons
Cardiff

STRUCTURE

Flowcharter from Supersoft is an unusual program which lets you examine your basic programs in the form of a flowchart. This can, theoretically at least, let you examine your program's structure and see how it can be improved

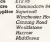
Flowcharter is loaded into memory and resides there whilst you load in your Basic program. Any sort of Basic program may be featured provided it does not exceed the 26620 bytes available once Flowcharter is in place

Flowcharter is called by a SYS command and offers a menu which allows the chart to be dumped either to a printer or to the screen. On longish programs the flowchart is created in sections which can be examined by scrolling through with a cursor

What of the actual flowchart itself? Essentially it's a rather limited affair, clever as it is and can be reduced to the following: Command lines are given differently shaped boxes according to type, and lines link the different sections of the program – arrows indicate in which direction the program is 'flowing'

I found it interesting to examine programs using the flowcharter, but doubt how valuable this kind of analysis really is. Regard it as an interesting educational tool, rather than a really valuable utility

Program *Flowcharter*
Price *£12 95*
Micro *Commodore 64*
Supplier *Supersoft*
Winchester House
Canning Road
Wealdstone
Harrow
Middlesex



Pick of the week

TIME TRAVELLER

The Eidolon, a new Activision game due for release in a few weeks, is also the latest from Lucasfilms software division. The previous Lucasfilm offerings, particularly those using fractals (a landscaping technique), have seemed to be technically clever but dull to play – I'm thinking particularly of *Raid on Fractalus*

The Eidolon is the first of the fractal games to match gameplay with technical cleverness. The plot, though simple, mixes some basic alien bashing with a little strategy, yet retains the impressive use of fractals to create rocky landscapes. In this case, the playing area is a series of caves populated by a series of strange creatures which feed off the power of your travelling device – the Eidolon.

Generally the setting is very H G Wells with Victorian inventors experimenting with the powers of the mind. Main weaponry are fireballs distinguished by colour. The colour of the fireball determines its properties – some freeze the monsters, others transform one monster in to another

To move from one level to another you must find and defend a rather unpressive dragon – again you need to find the right combination of fireballs. The game should prove very addictive and the graphics are most impressive. If you've been unimpressed by the fractal system before this may be the time to look again

Program *The Eidolon*
Price *£9 95*
Micro *Commodore 64*
Supplier *Activision*
15 Harley House
London NW1

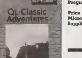
This Week

Program	Type	Micro	Price	Supplier
Think!	S	Amstrad	£8 95	Ariolasoft
CBasic Compiler	Ut	Amstrad	£49 95	Digital Research
Dr Draw	Ut	Amstrad	£49 95	Digital Research
Dr Graph	Ut	Amstrad	£49 95	Digital Research
Oddjob	Ut	Amstrad	£12 95	Pride Utilities
Pascal Mt +	Ut	Amstrad	£49 95	Digital Research
Scriptor	Ut	Amstrad	£6 95	Pride Utilities
Wordplay	Ed	BBC B	£12 90	BBC Soft
Grumpy Supersleuth	Arc	Commodore 64	£6 95	Gremlin Graphics
Koronis Rift	Arc	Commodore 64	£9 95	Activision
Discom 1	Ut	Commodore 64	£19.95	Scribos
Flowcharter	Ut	Commodore 64	£12 95	Supersoft
Prographics	Ut	Dragon 32	£2 50	Diadem
Battle of the Planet	Arc	Spectrum	£9.95	Micro-Gen
Costa Capers	Arc	Spectrum	£7.95	Firebird
Realm of Impossibilities	Arc	Spectrum	£7 95	Ariolasoft
Skyfox	Arc	Spectrum	£8 95	Ariolasoft
Computer Wordsearch	S	Spectrum	£6.95	Softfirm

Key **Ad** – adventure **S** – strategy simulation
Arc – arcade **Ut** – Utility **Ed** – education

GOOD VALUE

Good value from Sinclair for QL owning text adventure fans For £9 95 you can get QL versions of both *Mordon's Quest* and the original *Classic Adventure* of which it forms the sequel



Text only, both adventures are likely to appeal to purist adventurers who get into the pure puzzle and other world aspect of the genre Both adventures have previously been released on zillions of other micros and that may be one reason they are relatively cheap here

Little point in discussing such lengthy and complex games which have, in any event, been discussed elsewhere. As adventures they fall into the moderate to difficult category, probably not for beginners As technical achievements, there is nothing very special about either, the vocabulary is not especially wide – a standard verb noun format

One criticism I have of the QL edition is that no real effort has been made to make the screen look attractive. The boring QL character set is used and worse still, on our TV set at least, spills off both sides of the screen so that one or two characters are lost. Nevertheless, for fans of the classic adventure style this is an excellent value package

Program *QL Classic Adventures*
Price *£9 95*
Micro *QL*
Supplier *Sinclair Research*
Milton Hall
Milton
Cambridge

HORROR!

Superman! The game! The licensing deal! The disappointment! The sneaking it out quickly and making sure none of the magazines get to review it in time to spoil the Christmas trade! The Great Space Race!

Let's be generous, I'm sure that Beyond's contract to licence *Superman the game* from First Star probably didn't say "In return for lots of money and the rights to a lot of good games, First Star promise to supply one (1) real turkey", and I can imagine the horror in Beyond's offices when this one came through the door close to Christmas, but my sympathy ends when they try to sell the bloody thing

Superman is like several Vic20 games stuck together with a scrap of programming sticky tape in order to pretend there is a plot. Put it another way If *Superman the game* were analagous to Superman the superhero, then *Superman the game* is what happens when Superman the hero is made to eat five tons of Kryptonite

Not only are the games which make up the program dire, they are all fairly similar Shunt superman around (he flys as though attached to a particularly unrealistic flying trapeze), blast things with his super heat vision (the super heat vision, a relatively minor feature of the original character, has been raised to great importance here), bounce things off adjustable barriers, pick up humans, and rescue them.

It isn't original (you can play 'spot the game rip-off'), it isn't well programmed (the animation seems to consist of the flicker caused by not knowing how to use large sprites properly), and it isn't worth buying Tell the world IT MAY ALREADY BE TOO LATE!

Program *Superman*
Price *£9 95*
Micro *Commodore 64*
Supplier *Beyond*
Lector Court
151 Farringdon Road
London EC1

DISC USE

Discom 1 is a disc utility that provides a host of useful features to facilitate disc use Of the 15 separate items on the disc, many would only be of use to fairly knowledgeable users – like accessing the Commodore Disc Operating System, for example – but there may be enough for the more casually interested.

There are commands to get a continuous disc directory to format of backup a disc to make a disc read only as well as to scratch files (and retrieve an accidentally scratched file) – you may also give files special codewords which lock any file until a letter sequence is typed in

For those who have a lot of valuable programs and data on file, *Discom* could be very useful

For the general games player I think the price of £19 95 will probably make it too expensive for the relatively small amount of file handling required

Program *Discom 1*
Price *£19 95*
Micro *Commodore 64*
Supplier *Scribos*
2 Eden House
Mansfield
Woodhouse
Nottinghamshire

This Week

Activision, 15 Harley House, Marylebone Road, London NW1 01 486 7588 **Ariolasoft,** Suite 105/6 Asphalte House, Palace Street, London SW1E 5US, 01 834 8507 **BBC Soft,** 35 Marylebone High Street, London W1 4AA, 01 580 5577. **Diadem,** 320 Cregagh Road Cregagh Belfast BT6 9EW, **Digital Research,** Unit 12 Felton Way, Southfields Basildon Essex SS15 6SL **Firebird,** Wellington House, Upper St Martin s Lane, London WC2H 9DL, 01 379 6755 **Gremlin Graphics,** Alpha House, 10 Carver Street, Sheffield, S1 4FS, 0742753423 **Mikro-Gen,** 44 The Broadway, Bracknell, Herts 0344 427317 **Pride Utilities** 7 Chalton Heights, Chalton, Luton Beds LU4 9UF **Scribos,** 2 Eden Low House, Mansfield Woodhouse Nottinghamshire NG 19 9RA 0623 650961 **Softfirm,** 21 Ashbourne Way Thatcham Berks RG13 4SJ **Supersoft,** Winchester House Canning Road, Wealdstone, Harrow Middlesex HA3 7SJ 01 861 1166

Inner conflicts

The use of computers in diagnosis of physical disorders is now well established, particularly in American hospitals

Massive data banks of symptoms can be cross referenced to diagnose an illness to a 99% level of accuracy (the best human consultants have been found to achieve only 97%). These diagnostic expert systems can even make what appears to be intuitive guesses on a patient's illness by methods which are in fact based on mathematical probabilities

In Western society mental stress disorders and neuroses seem to be responsible for an ever increasing level of patients' incapacities and physical disorders. It would therefore seem inevitable for the computer to move into the field of mental health treatment.

To some extent this is already occurring initially at the experimental and academic level, but is now manifesting itself in the form of practical treatment.

It is unlikely that a conversation with a computer could be programmed to uncover any serious underlying conflicts of specific past experiences causing a patient's present neurosis which might manifest itself in such symptoms as depression or phobia.

If not psycho-analysing the patient, we might soon be seeing the computerisation of existing behavioural treatments such as systematic desensitisation. This is a long-established method by which the stimulus which initiates the anxiety state, such as open spaces in the case of agoraphobia, are gradually introduced while simultaneously reducing the anxiety state by reassurance or drugs.

Unfortunately these sessions can in some cases be very time-consuming and require the presence of a qualified psychiatric nurse

A new form of treatment for agoraphobia is now currently under development (Desensitisation Monitoring System – DMS), which can be administered by the patients themselves as frequently as they like It incorporates computer graphics to simulate walking into ever increasing opening corridors, while simultaneously monitoring the anxiety state of the patient which is displayed in a corner of the screen, thus enabling chronic patients to familiarise themselves with the idea and feeling of walking in open spaces, and come to terms with the associated anxiety state

It is an introductory treatment prior to actually going out into the world accompanied by someone, which by itself would be too major a step for some patients who have spent years confined to small rooms

But desensitisation techniques are still only treatments of symptoms, and while some psychiatric doctors such as Eysenck believe that the symptom itself is the illness others believe that symptoms such as agoraphobia are only manifestations of deeper inner conflicts, which must be resolved for an effective lasting cure.

Some qualified psychologists suggest any possibility of treating any form of neurosis by computer as absurd. Dr Victor Myer, head psychiatrist and senior lecturer at Middlesex Hospital has condemned the treatment of 'symptoms' while leaving the underlying problems unresolved. Dr Myer states that mental illness might manifest itself in symptoms but it is usually a faulty entire 'life style' that must be identified and restructured to effect a lasting cure for the patient, and no computer could do that.

However, at St David's hospital in Wales another computerised therapy for the treatment of a pure symptom, again agoraphobia, is already taking place

The conflicting attitudes of these two senior analysts serves to illustrate the fundamental division in the psychiatric world of whether to treat the symptom itself, or whether to treat the theoretical inner conflict

In the physiological world of medicine expert systems for the treatment of physical illnesses such as goitre, cancers and blood disease are easy to utilise Computers are now also used to identify location of brain lesions to enable more efficient and faster neurological surgery But it is unlikely that a computer could ever talk to a human under mental stress in the same way as an analyst.

The compassion and instinct of one human being treating another for mental illness via their own personal experience and understanding of emotional feelings is something that even if it were clumsily imitated is unlikely to ever be successfully duplicated.

David Karliner

Puzzle No 192

Write out the nine digits, 1 to 9 in order in a row on a sheet of paper The problem is to insert into this row two 'plus' signs and two 'minus' signs so that the sum so formed will equal exactly 100

For example, I may have written.

1 + 23 + 456 - 78 - 9

only in this case the total would come to 393, and not 100

The signs can be in any order along the line, but you can only put them *between* two of the digits – that is you cannot for example, put either a plus or a minus at the extreme left hand end of the row

Given these restrictions, how many different ways can you find to perform the task. And what are they?

Solution to Puzzle No 187

The solution depends on testing varying sums of money to determine if the amount remaining after each transaction is a whole number of pence.

```
10 LET PENCE=3
20 LET G=PENCE/3:LET R=PENCE-G
30 LET R=R-30
40 LET R=R/2:LET S=R
50 IF R<>INT(R) OR R<1 THEN GOTO 110
60 LET R=R-(G/2)
70 IF R<>INT(R) OR R<1 THEN GOTO 110
80 LET R=R-(S/3)
90 IF R<>INT(R) OR R<1 THEN GOTO 110
100 IF R=50 THEN PRINT PENCE;"  ";R
110 LET PENCE=PENCE+3
120 GOTO 20
```

Starting with an initial value of three pence, the result of each transaction is assessed If the remainder falls to less than one penny or is fractional, a revised starting value is calculated. This increases in multiples of three pence as the first transaction requires one third of the amount to be spent.

Winner of Puzzle 187

The winner is Miss H L Bailey, of Hunter Road, Sheffield, South Yorkshire S6 4LF who will be receiving £10

Rules

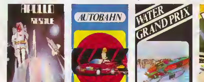
The closing date for Puzzle 187 is February 10

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